(12) PATENT ABSTRACT
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(54) SWIMMING POOL CONSTRUCTION

(71) DURA POOLS PTY LTD

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(74) SF

(57) A swimming pool is also claimed.

Claim

1. A method of manufacturing a swimming pool shell comprising the steps of:

providing a mould cavity defined between an inner and outer mould part; placing fine tissue fibreglass matting adjacent said inner mould part; placing course fibreglass matting between said fine matting and said outer mould part; injecting fibreglass resin having a colouring agent into said cavity; and allowing the resin to cure.

COMMONWEALTH OF AUSTRALIA

PATENTS ACT 1952

Form 10

COMPLETE SPECIFICATION

(ORIGINAL)

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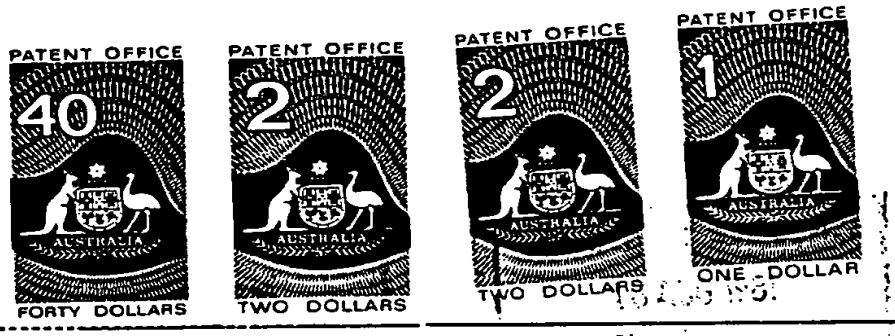

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Complete Specification for the invention entitled :

"IMPROVED SWIMMING POOL CONSTRUCTION"

The following statement is a full description of this invention, including the best method of performing it known to ~~me~~/us :

The present invention relates to the manufacture of swimming pools and more particularly but not exclusively to the manufacture of fibreglass pools.

It is a disadvantage of known methods of manufacturing, particularly fibreglass swimming pools, that the decorative inner layer of fibreglass which abuts the water of the pool is a separate colour containing layer to that of the remainder of the fibreglass structure. This decorative layer in practise varies considerably in thickness, and accordingly provides the pool with the major defect in that this decorative colour often bubbles and cracks and peels off in patches. This particularly detracts from the appearance of the pool as well as providing other cleaning problems.

It is a further disadvantage of known pools that the generally vertically extending side walls of fibreglass pools often come away from the concrete or cement mix backing.

It is an object of the present invention to overcome or substantially ameliorate the above disadvantages.

There is firstly disclosed herein a method of manufacturing a swimming pool shell comprising the steps of:

providing a mould cavity defined between an inner and outer mould part; placing fine tissue fibreglass matting adjacent said inner mould part; placing course fibreglass matting between said fine matting and said outer mould part; injecting fibreglass resin having a colouring agent into said cavity; and allowing the resin to cure.

There is further disclosed herein a swimming pool comprising a fibreglass shell having an inner and outer surface; a layer of fine tissue fibreglass matting located

adjacent said inner surface; course fibreglass matting located between said fine matting and said outer surface; coloured fibreglass resin encompassing the fine and course matting; a reinforcing wall fixed to said shell in a spaced relationship thereto and outwardly of said outer surface so as to provide a space; and a reinforcing material located within said space.

A preferred form of the present invention will now be described by way of example with reference to the accompanying drawings, wherein:

Figure 1 schematically depicts a part sectioned fibreglass swimming pool;

Figure 2 schematically depicts a section of the vertical wall of the pool of Figure 1;

Figure 3 schematically depicts a further alternative for the wall construction of the swimming pool of Figure 1; and

Figure 4 schematically depicts in perspective view a method of reinforcing the fibreglass wall of the pool of Figure 1;

Figure 5 is a plan view of the wall of Figure 4;

Figure 6 is a front elevation of the wall of Figure 4; and

Figure 7 is a section A-A taken through the wall of Figure 4.

In Figure 1 there is schematically depicted in part sectioned perspective view a pool 10 with a fibreglass shell having an inner generally vertical wall 11 formed of a fibreglass layer to which is attached an outer wall 12 which

defines a cavity behind the wall 11, which cavity receives a layer of cement or sand and cement mix 13.

Now with reference also to Figure 2, the wall 11 may consist of fibreglass construction which may be formed by pressure moulding; i.e. the pool 10 is formed between an inner and outer mould with the fibreglass matting located between the two moulds and the resin subsequently injected. It is preferable that the injected resin is provided with a colouring so that the colouring extends through the entire thickness of the wall 11. It would be advantageous to provide the inner surface of the wall 11 with a smooth decorative appearance which may be achieved by providing the inner portion of the wall 11 with "tissue' and fibreglass matting. The body of the wall 11 may be then provided with a coarser meshed fibreglass matting 15.

As a further means of strengthening the wall 11, there may be provided a reinforcing sheet 18 which may comprise a compressed asbestos board. This would be embedded in the body of the wall 11 which is provided with the coarser mesh 17. Again the interior surface of the wall 11 would be provided with "tissue" and fibreglass matting.

Now with reference to Figure 4, there is depicted a means of reinforcing the wall 11 which would consist of an inner fibreglass layer 20 which is supported by generally vertically extending ribs 23. The ribs 23 may consist of timber or metal battons glassed to the fibreglass layer 20. Fixed to the ribs 23 is a substantially rigid undulating outer fibreglass wall 21 which defines a cavity immediately behind the layer 20 which receives a concrete or sand and cement mix 22. By the sheet 21 being fixed to the ribs 23,

separation of the layer 20 from the concrete layer 22 is inhibited.

As can be seen from Figures 6 and 7, the inner wall 20 is located in the concrete floor 24 of the pool, as well as the concrete coping 25 at its top edge.

The claims defined in the invention are as follows:

1. A method of manufacturing a swimming pool shell comprising the steps of:

providing a mould cavity defined between an inner and outer mould part; placing fine tissue fibreglass matting adjacent said inner mould part; placing course fibreglass matting between said fine matting and said outer mould part; injecting fibreglass resin having a colouring agent into said cavity; and allowing the resin to cure.

2. The method of claim 1 further including placing a reinforcing sheet of generally rigid board between said fine matting and said outer mould board.

3. A swimming pool comprising a fibreglass shell having an inner and outer surface; a layer of fine tissue fibreglass matting located adjacent said inner surface; course fibreglass matting located between said fine matting and said outer surface; coloured fibreglass resin encompassing the fine and course matting; a reinforcing wall fixed to said shell in a spaced relationship relative thereto and outwardly of said outer surface so as to provide a space; and a reinforcing material located within said space.

4. The pool of claim 3 wherein said reinforcing material is a mixture containing concrete.

5. The pool of claim 3 or 4 wherein said reinforcing wall is formed of fibreglass.

6. The pool of claim 4 further including a reinforcing sheet of generally rigid board located between said fine matting and said outer surface.

7. The pool of claim 6 wherein said sheet is compressed asbestos board.

8. A swimming pool substantially as hereinbefore described with reference to the accompanying drawings.

DATED this EIGHTEENTH day of AUGUST, 1981

DURA POOLS PTY. LIMITED

Patent Attorneys for the Applicant
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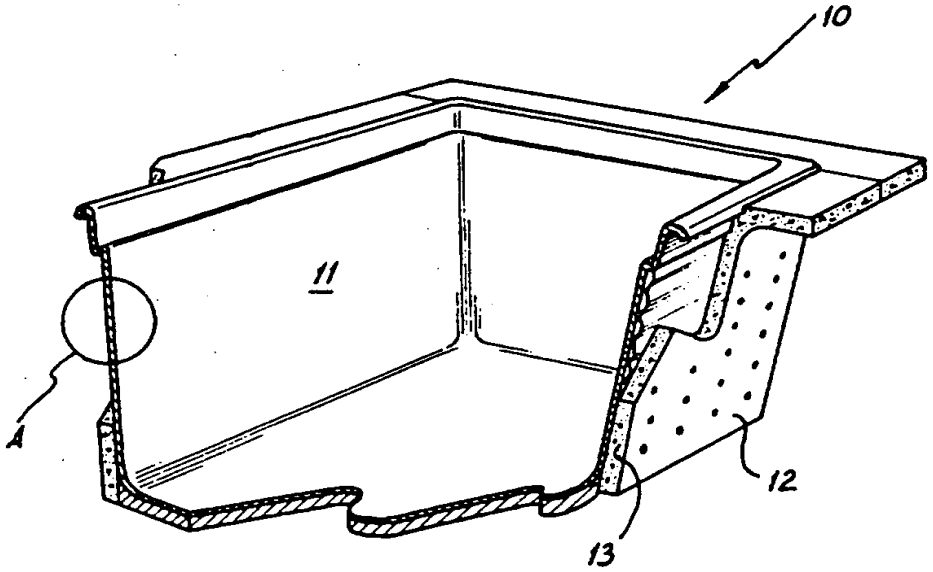

FIG. 1

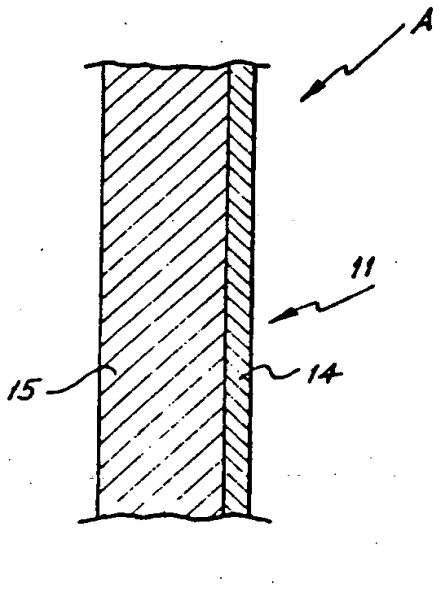

FIG. 2

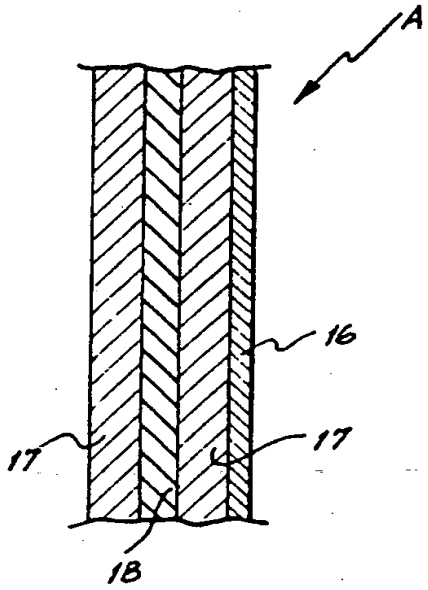

FIG. 3

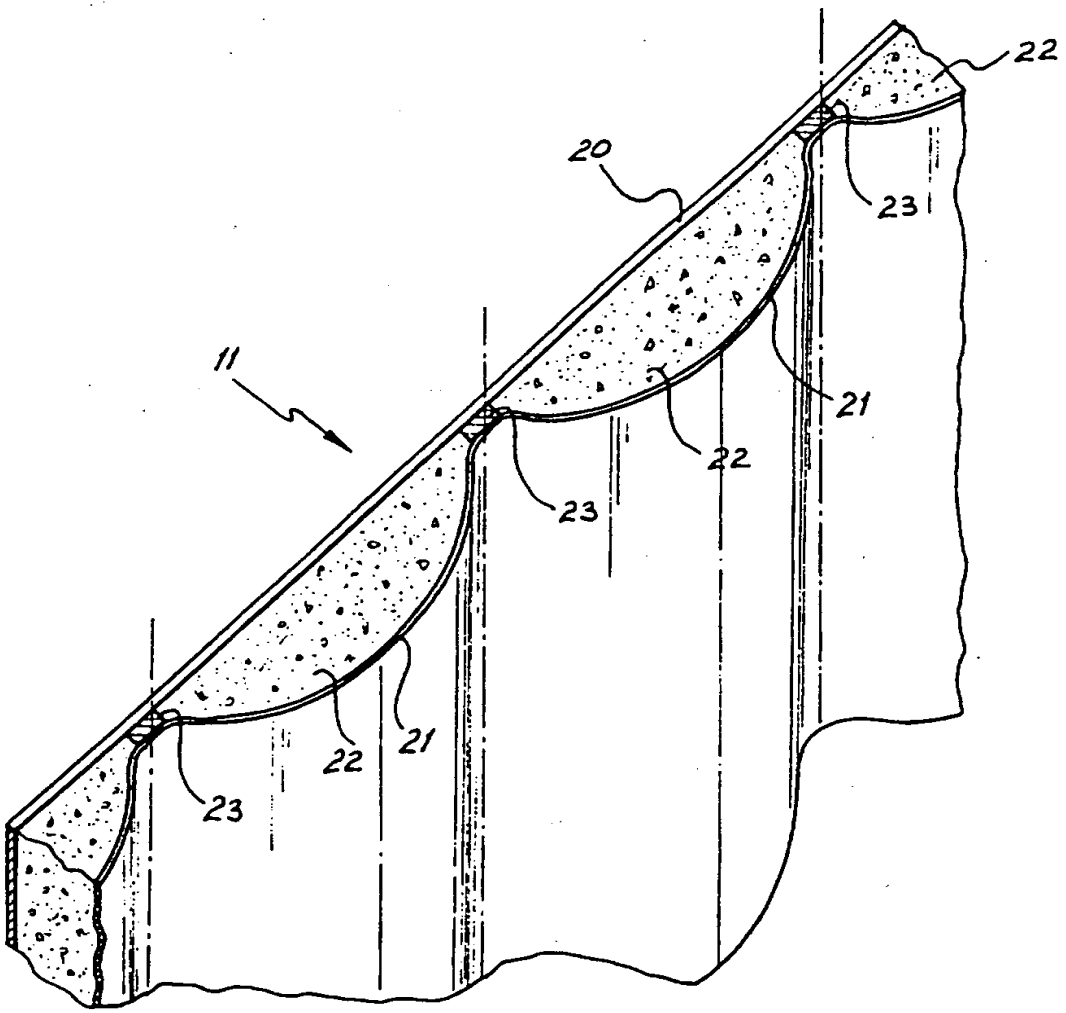

FIG. 4

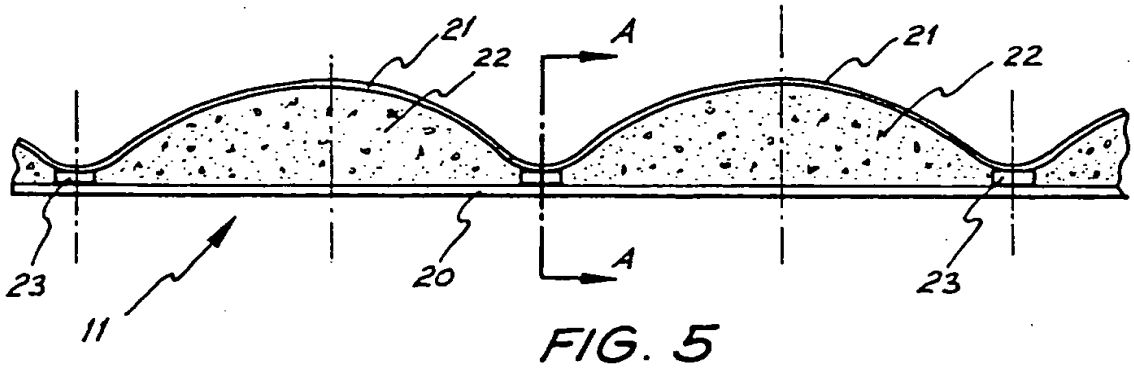

FIG. 5

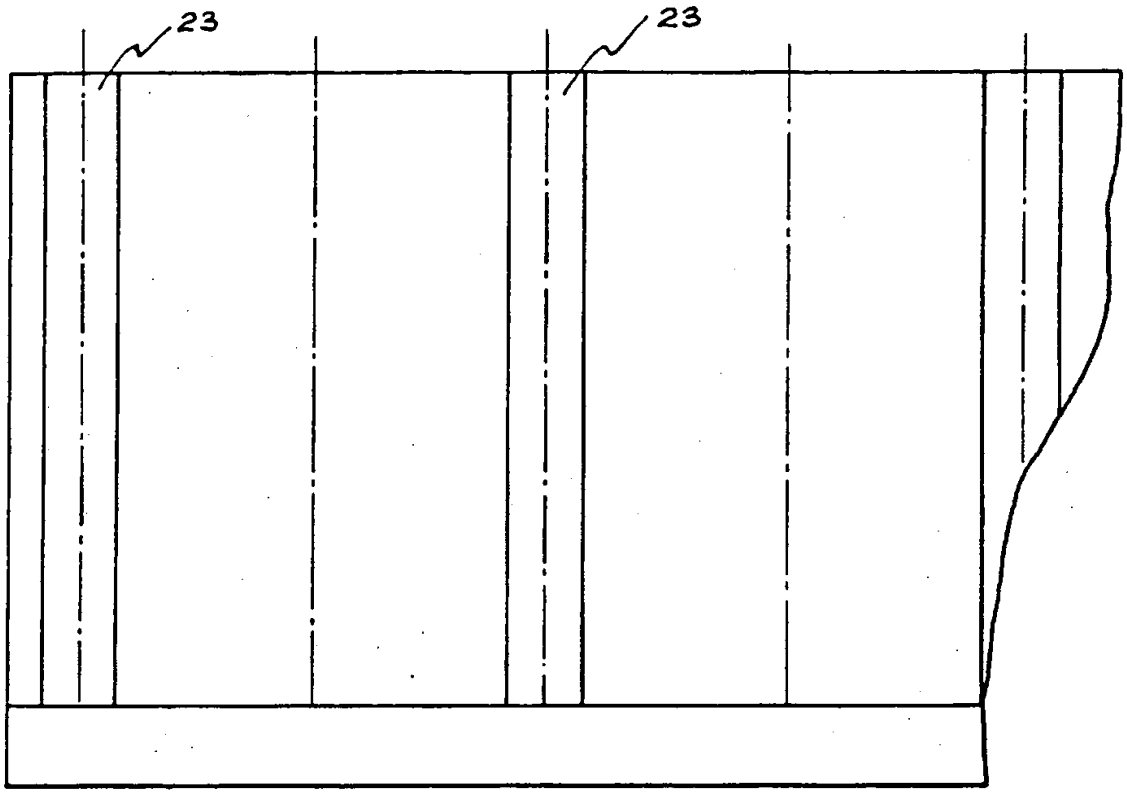

FIG. 6

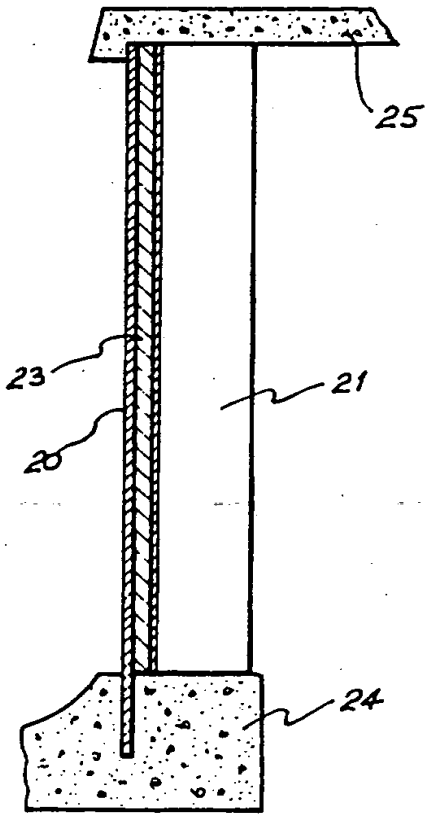

FIG. 7